REMARKS

The Examiner rejected claims 6-12 and 21-22 under 35 U.S.C. §102(b) as being anticipated by an IEEE paper entitled "Channel Routing in Manhattan-Diagonal Model," to Das, et al. (Das). The Examiner rejected claims 13-15 under 35 U.S.C. §103(a) as being obvious over Das. Applicants have amended claims 6, 8, 21 and 22. Applicants have not added or canceled any claim. Accordingly, claims 6-15 and 21-22 will be pending in the application after entry of this Amendment.

I. Rejection of Claims 6-7 Under §102(b)

The Examiner rejected claims 6-7 under §102(b) as being anticipated by Das. Claim 7 is dependent on claim 6. Claim 6 recites a method that defines routes for nets in an arbitrary region of a circuit layout. Each net has a set of pins. The method uses a first set of lines to measure length of routes. The method uses a second set of lines to measure congestion of routes. The method uses a third set of lines to partition the arbitrary region into a first set of sub-regions. For each net, the method identifies a route that traverses a group of first-set sub-regions that contain the net's set of pins.

Applicants respectfully submit that Das does not disclose, teach, or even suggest such a method. In the Office Action, the Examiner states: "Das et al. teach a method of defining routes for nets in a region of circuit layout." The cited portion of Das, however, discusses channel routing, a restricted type of routing where the routing region is bounded by two sets of terminals. *See* Das, Figures 1-14. Das' channel routing algorithms carry out sorting "topologically to determine a linear ordering of nets." Das does not actually use a first set of lines to measure the length of the routes. Nor does Das utilize a second set of lines to measure congestion.

In contrast, claim 6 recites a method that uses a first set of lines to measure length and a second set of lines to measure congestion. Moreover, to further distinguish Das, Applicants have amended claim 6 to recite that a third set of lines partition an arbitrary region into a first set of sub-regions. This amendment clarifies that the method of claim 6 relates to area routing, which is distinct from channel routing, the subject matter of the Das article. Thus, Das does not disclose, teach, or even suggest the method of claim 6.

Accordingly, Applicants respectfully submit that Das neither anticipates nor invalidates claim 6. Since claim 7 is dependent on claim 6, Applicants respectfully submit that Das does not anticipate or otherwise invalidate claim 7 for at least the reasons discussed above in relation to claim 6. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(b) rejection of claims 6-7.

II. Rejection of Claims 8-15

The Examiner rejected claims 8-12 under §102(b) as being anticipated by Das. The Examiner further rejected claims 13-15 under §103(a) as being obvious over Das. Claims 9-15 are dependent on claim 8. Claim 8 recites a method that defines routes for nets in an arbitrary region of a circuit layout where each net has a set of pins. The method uses a first set of intersecting lines to measure length of routes and to define a first set of sub-regions within an arbitrary region of a circuit layout. The method uses a second set of intersecting lines to measure congestion of routes. The method identifies a route that traverses a group of the first-set sub-regions that contain the net's set of pins. Each route has a set of route segments, and each route segment traverses two sub-regions in the first set of sub-regions.

Applicants respectfully submit that Das does not disclose, teach, or even suggest such a method. According to the portion of Das cited by the Examiner, Das uses channel routing, which is a restricted type of routing bounded by two sets of terminals. Das' channel routing algorithms carry out sorting "topologically to determine a linear ordering of nets." Das does not actually use a first set of lines to measure the length of the routes. Nor does Das utilize a second set of lines to measure congestion.

In contrast, claim 8 recites a method that uses a first set of lines to measure length and a second set of lines to measure congestion. Moreover, to further distinguish Das, Applicants have amended claim 8 to recite that a first set of intersecting lines defines a first set of sub-regions within an arbitrary region of the circuit layout. This amendment clarifies that the method of claim 8 relates to area routing, which is distinct from channel routing, the subject matter of the Das article. Thus, Das does not disclose, teach, or even suggest the method of claim 8.

Accordingly, Applicants respectfully submit that Das neither anticipates nor invalidates claim 8. Since claims 9-15 are dependent on claim 8, Applicants respectfully submit that Das does not anticipate or otherwise invalidate claims 9-15 for at least the reasons discussed above in relation to claim 8. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(b) rejection of claims 8-12, and the §103(a) rejection of claims 13-15.

III. Rejection of Claim 21 Under §102(b)

The Examiner rejected claim 21 under §102(b) as being anticipated by Das. Claim 21 recites a computer readable medium that has a computer program. The computer program defines routes for nets in an arbitrary region of a circuit layout. The computer

program has sets of instructions that use a first set of lines to measure length of routes. The instructions use a second set of lines to measure congestion of routes. The instructions use a third set of lines to partition an arbitrary region into a first set of sub-regions. For each net, the instructions identify a route that traverses a group of first-set sub-regions that contain the net's set of pins.

Applicants respectfully submit that Das does not disclose, teach, or even suggest such a computer program. The cited portion of Das describes channel routing, a restricted type of routing bounded by two sets of terminals. Das' channel routing algorithms sort "topologically to determine a linear ordering of nets." Das does not actually use a first set of lines to measure the length of the routes. Nor does Das utilize a second set of lines to measure congestion. Further, Das does not utilize a third set of lines to partition the region into a first set of sub-regions.

In contrast, claim 21 recites a method that defines routes for nets in an arbitrary region of a circuit layout. Moreover, to further distinguish Das, Applicants have amended claim 21 to recite instructions, which partition an arbitrary region into sub-regions. This amendment clarifies that the method of claim 21 relates to area routing, which is distinct from channel routing, the subject matter of the Das article. Thus, Das does not disclose, teach, or even suggest the computer program of claim 21.

Accordingly, Applicants respectfully submit that Das neither anticipates nor invalidates claim 21. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(b) rejection of claim 21.

IV. Rejection of Claim 22 Under §102(b)

The Examiner rejected claim 22 under §102(b) as being anticipated by Das. Claim 22 recites a computer readable medium that has a computer program. The computer program defines routes for nets in an arbitrary region of a circuit layout. The computer program has sets of instructions for using a first set of intersecting lines to measure length of routes and to define a first set of sub-regions within an arbitrary region of a circuit layout. The instructions use a second set of intersecting lines to measure congestion of routes. The instructions identify for each net, a route that traverses a group of first-set sub-regions that contain the net's set of pins. Each route has a set of route segments. Each route segment traverses two sub-regions in the first set of sub-regions.

Applicants respectfully submit that Das does not disclose, teach, or even suggest such a computer program. The cited portion of Das describes channel routing, a restricted type of routing bounded by two sets of terminals. Das' channel routing algorithms sort "topologically to determine a linear ordering of nets." Das does not actually use a first set of lines to measure the length of the routes. Nor does Das utilize a second set of lines to measure congestion. Moreover, to further distinguish Das, Applicants have amended claim 22 to recite that a first set of lines define a first set of sub-regions within an arbitrary region. This amendment clarifies that the method of claim 22 relates to area routing, which is distinct from channel routing, the subject of the Das reference. Thus, Das does not disclose, teach, or even suggest the computer program of claim 22.

Accordingly, Applicants respectfully submit that Das neither anticipates nor invalidates claim 22. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(b) rejection of claim 22.

CONCLUSION

In view of the foregoing, it is submitted that all claims, namely claims 6-15 and 21-22, are in condition for allowance. Reconsideration of the objections and rejections is requested. Allowance is earnestly solicited at the earliest possible date.

This Amendment is submitted with a petition and fee for a one month extension of time. Accordingly, Applicants believe no additional fee is required. However, in the unlikely event that the Patent Office determines that additional fees, extension, and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or fees due in connection with the filing of this document, or to credit any overpayment, to **Deposit Account: 50-1128** referencing docket: SPLX.P0085. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

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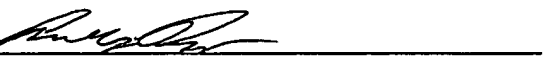

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